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PART IV.

Official Papers.

MEMO.

IN RE-EXPERIMENT WITH "SCRUB EXTERMINATOR" ON PRICKLY PEAR.

On the morning of the 14th of May 1891, the experiment relating to the effect of "Scrub Exterminator" on the destruction of Prickly Pear, was conducted in the presence of Messrs. L. Ricketts, J. Cameron, Haudin, G. Ricketts, Puttanna Chetti, Subbraya Iyer, B. Hira Singh, B. Krishna Singh and others, on the spot previously selected, overgrown with the noxious plant, situated just behind the Barr Sepoys' quarters. The following was the method by which the experiment was made :—

II. Two cisterns each holding 10 gallons of water were placed side by side. In which were prepared two solutions of different strengths containing 3 and 6 gallons of water to 1 lb of the chemical. Two Roatary pumps were fixed to the horizontal bar, with pipes leading to the cisterns. By means of hoses, the solution was first splashed on the Prickly Pear and then well sprinkled over.

III. A fresh solution was prepared with quite a different strength in the proportion of 2 lbs of the chemical to 5 gallons of water. With this solution the following experiments were tried :—

(1.) Three or four clumps were cut and the roots of them were then saturated in this solution.

(2.) The solution was poured all round the plant just near the roots, the plant being left undisturbed.

IV. For further experiment, 10 lbs of the chemical were supplied to Mr. J. Cameron, the same quantity to Mr. G. Ricketts, to try with hand pumps, and 2 lbs to Mr. Krishna Singh to try on an isolated clump, and a request was made to report the result of each experiment.

V. The probable cost of the chemical used this morning was 9 shillings. To compare with this, the Vice-President of the City Municipal Board was asked to report on the probable cost of getting some prickly-pear rooted up and buried in pits. Mr. Puttanna Chetti reported that the cost of clearing an area of ground measuring $51' \times 6'$ and of pitting $6' \times 6' \times 8'$ was Rs. 2—1—0.

VI. Mr. B. Hira Singh who was deputed to report the result of the experiment made on the 14th May visited the spot on the 20th and 28th idem. The following was the full text of the report :—

(1.) The portion operated upon with the weak solution had shown symptoms of decay, but the dried up stems were spotted brown and slightly shrivelled up with green stems seen here and there.

(2.) The other portion operated upon with the strong solution had the remarkable appearance of complete drying up ; but in this case, the brown spots were wider and more conspicuous with fewer green stems.

(3.) The effect of the solution poured all round the plants was that they were dried up, not thoroughly, but brown and black spots were seen here and there.

(4.) The plants, to the roots of which the solution was applied, looked as fresh as before ; but still brown spots were visible where the drops of the solution had deposited themselves.

From the foregoing remarks, it will be seen that there is no necessity for using a stronger solution, as the effect is about the same in either case, it being simply a work of time.

VII. A further experiment was made near a small village called Marappanapalya about a mile down the Nundydroog road. The solution here used was that of a different strength containing 7 oz of the chemical to one gallon of water. 4 lbs of Scrub Exterminator were used. The site operated upon had completely dried up with few green leaves visible here and there ; but these leaves are spotted brown and rotting at the joints. The (pears) fruits were all rotted and completely withered.

VIII. With a fresh solution (8 oz. of the chemical to one quart of water) the experiment was made with satisfactory result. The stems were first hacked and the solution was then applied. Here the green leaves were few and far apart, covered here and there with brown patches indicating speedy decay.

IX. A fresh solution was again prepared by mixing ¾ lb of the chemical to ¾ gallon of water and applied to the Gold Mohur tree-Poinciana Regia-, the tree being girdled first to a depth of ¾ inch. The result of the experiment was that the tree completely withered.

The total cost of the experiment was Rs. 5—6—8.

Owing to great press of work, Mr. Cameron was unable to experiment with the Scrub Exterminator ; but (he says) judging from the experience and results obtained elsewhere, the Scrub Exterminator is more expensive and less efficacious than manual labor in this country.

X. The experiments in connection with the Scrub Exterminator on the destruction of the Prickly Pear, may be said to be more or less a failure. For on visiting on the 10th September 1891, the sites experimented upon on the 14th May 1891, it was found that young shoots were sprouting out here and there from apparently dead stems and leaves and not following the usual characteristic of the Prickly Pear, *viz.*, one stem growing out from the top of the other ; but shooting out from the centre. It is evident from this that wherever there is a slight germ of life left, the plant will shoot up again : even the shrubs intergrowing with the Prickly Pear plant have come up again.

XI. It is very doubtful whether the Prickly Pear will be killed by applying the solution two or three times and at stated intervals. The expense would be very great. In the area cleared by Mr. Puttanna Chetti, by manual labor, the Prickly Pear has all sprung up again showing imperfect clearance ; but the portions buried in pit and covered up show no symptoms of life.

XII. These experiments were tried during the hot weather and with a long and exceptional duration of heat, before the rains set in. The clump and leaves apparently dead and rotten are now studded with young fresh shoots here and there which will soon form the nuclei of fresh Prickly Pear clumps.

XIII. The experiment with "Scrub Exterminator" cannot altogether be considered to be a failure; if after the application of the solution, the dried up Prickly Pear be at once buried or burnt; but then it becomes a protracted business. Where labor is scarce and expensive, the solution, if applied, in the hot season more than once, will doubtless exterminate Prickly Pear and at a cheaper rate than can be done by manual labor ; but in a place like Mysore, where labor is comparatively cheap, it is better to give preference to the digging of pits, burying the plant therein and thoroughl ycovering up the same. In both methods, it will doubtless be found that some further slight work will be necessary before complete extermination of the noxious plant is effected.

27th January 1892.

L. RICKETTS,
Inspector General of Forests.